UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,700	06/29/2001	William Lawrance	52003204	9112

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EXAMINER
MANOSKEY, JOSEPH D

ART UNIT	PAPER NUMBER
2113	

DATE MAILED: 04/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _29 June 2001_.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-20_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-20_ is/are rejected.

7)☒ Claim(s) _1, 3, 6, 8, 10, 11, 13, 16, 18, and 20_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _29 June 2001_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Oath/Declaration

1.   The oath or declaration is defective. A new oath or declaration in compliance

with 37 CFR 1.67(a) identifying this application by application number and filing date is

required. See MPEP §§ 602.01 and 602.02.

> The oath or declaration is defective because:
> Non-initialed and/or non-dated alterations have been made to the oath or
> declaration. See 37 CFR 1.52(c).

Specification

2.   The disclosure is objected to because of the following informalities:

On page 1, the specification lists co-pending applications but the serial numbers

are not listed with them.

On pages 17-26, 32, 33, 36-39, the specification contains various illustrations. It

is requested these illustrations be removed from the specification and be placed in

formal drawings in accordance with 37 CFR 1.81.

Appropriate correction is required.

3.   The attempt to incorporate subject matter into this application by reference to the

list of publications on page 104 of the specification is improper because the examiner is

unsure if the applicant wishes these documents to be background information

incorporated by reference or if the applicant is disclosing these documents as prior art.

The examiner wishes to receive verification from the applicant concerning this issue.

4.   The lengthy specification has not been checked to the extent necessary to

determine the presence of all possible minor errors. Applicant's cooperation is

requested in correcting any errors of which applicant may become aware in the

specification.

Claim Objections

5.   Claims 1, 3, 6, 8, 10, 11, 13, 16, 18, and 20 are objected to because of the

following informalities:

In claims 1, 10, 11 and 20, recite "a plurality of plurality of computer systems," it

is believed that this should read "a plurality of computer systems".

In claim 3 and 13, it further adds steps to claim 2 and claim 12 respectively,

starting with step "J", but claim 2 and claim 12 have a final step "J". It is interpreted that

claim 3 and claim 13's first step should be step "K" and all following steps in the

respective claims should be incremented likewise.

In claim 6, 8, 16, and 18 recite "a fourth set of checkpoint status information",

which would imply there be a third set of checkpoint status information, but there is

none in either claim 6, 8, 16 and 18 or the respective claims that they are dependent

upon, claims 1 and 11.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

7.   Claims 7, 8, 17, and 18 recites the limitation "the program" in second lines of

claims 7 and 8 and the third lines of claim 17 and 18. There is insufficient antecedent

basis for this limitation in the claim. It is believed that the claims should read "the first

program", and will be interpreted as such for the purposes of further examination.

Claim Rejections - 35 USC § 102

8.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public
> use or on sale in this country, more than one year prior to the date of application for patent in the United
> States.

9.   Claim 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Housel,

III et al., U.S. Patent 5,907,678, hereinafter referred to as "Housel".

10.   Referring to claim 1, Housel teaches a method of checkpointing and restarting for

a plurality of computer systems (See Fig. 1 and Col. 2, lines 30-60 and Col. 4, lines 42-

43). Housel discloses the computer system having a first computer and a second

computer with an application running on each (See Col. 2, lines 34-36). Also the

second computer is taught to contain cache that can be implemented as a hard disk

(See Fig. 1 and Col. 7, lines 52-53). Housel discloses the system being composed of a

client and a server, which is interpreted as being a heterogeneous computer system

(See Col. 2, line 39). Housel teaches checkpointing of the first program and sending

checkpoint request to the second computer. The second computer provides a

checkpoint and copies the checkpoints into its checkpoint cache (See Col. 2, line 61 to

Col. 3, line15). After the checkpoints have been stored the second computer transmits

a checkpoint confirmation to the first computer, which is interpreted as a checkpoint

response (See Col. 3, lines 16-18).

11.   Referring to claim 2 and 12, Housel teaches repeating all the steps when it is

determined that a new checkpoint is desired (See Col. 3, lines 25-27).

12.   Referring to claims 3, 5, 7, 13, 15 and 17, Housel discloses the client, or first

program, sending an acknowledgement message to the server application, second

program, for starting a new session with the checkpoint cache, which is interpreted as

transmitting a rollback request. Housel teaches restarting the computers using the

checkpoint cache of the second computer to restart the session. Restarting the session

is interpreted as rolling back both first and second programs with the checkpoint status

information, which includes transmitting the checkpoint status information from the

second to the first computer. The most recent checkpoint cache is used (See Col. 4,

lines 17-41).

13.   Referring to claim 4 and 14, Housel teaches the second computer coping

checkpoint cache, this is interpreted as the first and second checkpoint file being the

same file (See Col. 3, lines 5-15).

14.   Referring to claim 6 and 16, Housel teaches a method of checkpointing and

restarting for a plurality of computer systems (See Fig. 1 and Col. 2, lines 30-60 and

Col. 4, lines 42-43). Housel discloses the computer system having a first computer and

a second computer with an application running on each (See Col. 2, lines 34-36). Also

the second computer is taught to contain cache that can be implemented as a hard disk

(See Fig. 1 and Col. 7, lines 52-53). Housel discloses the system being composed of a

client and a server, which is interpreted as being a heterogeneous computer system

(See Col. 2, line 39). Housel teaches checkpointing of the first program and sending

checkpoint request to the second computer. The second computer provides a

checkpoint and copies the checkpoints into its checkpoint cache (See Col. 2, line 61 to

Col. 3, line15). After the checkpoints have been stored the second computer transmits

a checkpoint confirmation to the first computer, which is interpreted as a checkpoint

response (See Col. 3, lines 16-18). Housel discloses the method occurring with multiple

terminal emulator applications and multiple host applications across various sessions

(See Col. 9, lines 17-19). This is interpreted as the first program on the first computer

sending and checkpoint status information to a third program on a third computer for

storing.

15.   Referring claim 8 and 18, Housel discloses the client, or first program, sending

an acknowledgement message to the server application, second program, for starting a

new session with the checkpoint cache, which is interpreted as transmitting a rollback

request. Housel teaches restarting the computers using the checkpoint cache of the

second computer to restart the session. Restarting the session is interpreted as rolling

back both first and second programs with the checkpoint status information, which

includes transmitting the checkpoint status information from the second to the first

computer. The most recent checkpoint cache is used (See Col. 4, lines 17-41). Housel

discloses the method occurring with multiple terminal emulator applications and multiple

host applications across various sessions (See Col. 9, lines 17-19). This is interpreted

as the first program on the first computer performing restarts with involving both the

second program on the second computer and the third program on the third computer.

16.   Referring to claim 9 and 19, Housel discloses a plurality of sessions open

between the first and second program for communications (See Col. 2, lines 30-35).

Housel also teaches flushing the files including the checkpoint files (See Col. 16, lines

25-30).

17.   Referring to claim 10, Housel teaches a computer program product for a method

of checkpointing and restarting for a plurality of computer systems (See Fig. 1 and Col.

2, lines 30-60 and Col. 4, lines 42-43). The computer program product is interpreted as

computer readable non-volatile storage medium encoded with software. Housel

discloses the computer system having a first computer and a second computer with an

application running on each (See Col. 2, lines 34-36). Also the second computer is

taught to contain cache that can be implemented as a hard disk (See Fig. 1 and Col. 7,

lines 52-53). Housel discloses the system being composed of a client and a server,

which is interpreted as being a heterogeneous computer system (See Col. 2, line 39).

Housel teaches checkpointing of the first program and sending checkpoint request to

the second computer. The second computer provides a checkpoint and copies the

checkpoints into its checkpoint cache (See Col. 2, line 61 to Col. 3, line15). After the

checkpoints have been stored the second computer transmits a checkpoint confirmation

to the first computer, which is interpreted as a checkpoint response (See Col. 3, lines

16-18).

18.   Referring to claim 11 and 20, Housel teaches a computer program product for a

method of checkpointing and restarting for a plurality of computer systems (See Fig. 1

and Col. 2, lines 30-60 and Col. 4, lines 42-43). This is interpreted as a data processing

system having software. Housel discloses the computer system having a first computer

and a second computer with an application running on each (See Col. 2, lines 34-36).

Also the second computer is taught to contain cache that can be implemented as a hard

disk (See Fig. 1 and Col. 7, lines 52-53). Housel discloses the system being composed

of a client and a server, which is interpreted as being a heterogeneous computer

system (See Col. 2, line 39). Housel teaches checkpointing of the first program and

sending checkpoint request to the second computer. The second computer provides a

checkpoint and copies the checkpoints into its checkpoint cache (See Col. 2, line 61 to

Col. 3, line15). After the checkpoints have been stored the second computer transmits

a checkpoint confirmation to the first computer, which is interpreted as a checkpoint

response (See Col. 3, lines 16-18).

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. The following art is cited for being closely related checkpoint and

rollback systems.

      U.S. Patent 6,442,663 to Sun et al.

      U.S. Patent 6,594,779 to Chandra et al.

      U.S. Patent 5,745,730 to Nozue et al.

      U.S. Patent 5,802,267 to Shirakihara et al.

      U.S. Patent Application Publication US 2002/0174379 to Korenevsky et al.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Joseph Manoskey whose telephone number is (703)

308-5466. The examiner can normally be reached on Mon.-Fri. (8am to 4:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Robert Beausoliel can be reached on (703) 305-9713. The fax phone

number for the organization where this application or proceeding is assigned is 703-

872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

JDM
April 1, 2004

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